

REMARKS

Claims 1 through 3, 5 through 20, 22, 23, and 25 through 34 are currently pending in the application.

This amendment is in response to the Office Action of March 9, 2006.

35 U.S.C. § 112 Claim Rejections

Claims 1 through 3, 5, 6, 8, 18 through 20, 22, 23 and 25 are rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicants respectfully traverse this rejection, as hereinafter set forth. Applicants have amended the inventions of presently amended independent claims 1 and 18 to set forth that the bottom opening having width in the range of about two diameters of a conductive sphere to about ten diameters of a conductive sphere which is set forth in the specification, page 9, lines 24 and 25. Applicants assert that presently amended independent claims 1 and 18 clearly comply with the provisions of 35 U.S.C. § 112, first paragraph.

Claims 1 through 3, 5, 6, 8, 18 through 20, 22, 23 and 25 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

Applicants have amended the claimed invention to particularly point out and distinctly claim the subject matter of the invention to comply with the provisions of 35 U.S.C. § 112. Applicants have amended the inventions of presently amended independent claims 1 and 18 to set forth that the bottom opening having width in the range of about two diameters of a conductive sphere to about ten diameters of a conductive sphere which is set forth in the specification, page 9, lines 24 and 25. Applicants assert that presently amended independent claims 1 and 18 clearly comply with the provisions of 35 U.S.C. § 112, second paragraph.

Therefore, presently amended claims 1 through 3, 5, 6, 8, 18 through 20, 22, 23 and 25 are allowable under the provisions of 35 U.S.C. § 112.

35 U.S.C. § 103(a) Obviousness Rejections

Obviousness Rejection Based on Sakemi et al. (U.S. Patent 5,655,704)

Claims 1 through 3, 6, 8, 18 through 20, 22, 23 and 25 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Sakemi et al. (U.S. Patent 5,655,704). Applicants respectfully traverse this rejection, as hereinafter set forth.

M.P.E.P. 706.02(j) sets forth the standard for a Section 103(a) rejection:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings. Second, there must be a reasonable expectation of success. Finally, **the prior art reference (or references when combined) must teach or suggest all the claim limitations.** The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). (Emphasis added).

After carefully considering the cited prior art, the rejections, and the Examiner's comments, Applicants have amended the claimed invention to clearly distinguish over the cited prior art.

Turning to the cited prior art, the Sakemi et al. reference teaches or suggests a solder ball mounting apparatus using a template 4 to position solder balls 3 from a hopper 12 onto pads 2a of a substrate 2. The substrate 2 only having a plurality of electrodes 2a above the surface of the substrate 2, not having any electrodes whatsoever recessed into the surface of the substrate 2. There is no teaching or suggestion in the Sakemi et al. reference to dispense solder paste from the hopper 12 into or through a template 4 onto the substrate 2. There is no teaching or suggestion whatsoever in the Sakemi et al. reference for dispensing solder balls 3 onto electrodes 2a located in recesses in a substrate 2.

Applicants assert that the Sakemi et al. reference does not establish a *prima facie* case of obviousness under 35 U.S.C. § 103 regarding the claimed inventions of presently amended independent claims 1 and 18 because, at the least, the Sakemi et al. reference fails to teach or suggest all of the claim limitations of the claimed inventions. Applicants assert that the Sakemi et al. reference fails to teach or suggest the claim limitations of presently amended independent

claims 1 and 18 calling for "a hopper, said hopper having a bottom opening having a dimension extending across said first pattern for dispensing said spheres into said plurality of through-holes extending across said stencil plate, the bottom opening having width in the range of about two diameters of a conductive sphere to about ten diameters of a conductive sphere, said hopper having a bottom lower surface spaced from an upper surface of the stencil plate a distance in the range of about less than one-half the diameter of a conductive sphere to about less than one-third the diameter of a conductive sphere.

Applicants assert that the Sakemi et al. reference contains no teaching or suggestion whatsoever regarding such claim limitations. Therefore, such prior art cannot establish a *prima facie* case of obviousness under 35 U.S.C. § 103 regarding the claimed inventions of presently amended independent claims 1 and 18. Accordingly, presently amended independent claims 1 and 18 are allowable as well as dependent claims 2, 3, 5, 6, 8, 19, 20, and 22 through 25 therefrom.

Applicants submit that claims 1 through 3, 6, 8, 18 through 20, 22, 23 and 25 are clearly allowable over the cited prior art.

Applicants request the allowance of claims 1 through 3, 6, 8, 18 through 20, 22, 23 and 25 and the case passed for issue.

Respectfully submitted,



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